№ Стом-21 ИН

Abstracts of lectures on ophthalmology for 4th year students of the Faculty of Dentistry

Lecture 1.

Topic: Clinical anatomy of the organ of vision. Connection of eye pathology with dental disorders.

Lecture plan:

1. Anatomy of the eye socket.
2. The structure of the eyelids.
3. The connective membrane of the eye or conjunctiva.
4. The eyeball and its shells.
5. Optic nerve and visual pathways.
6. The inner core of the eye.
7. The relationship between the dental system and the organ of vision.

Text material of the lecture: Eye socket or orbit. The shape of the newborn's eye socket. The upper wall of the eye socket. The inner wall of the eye socket. The outer wall of the eye socket. The lower wall of the eye socket. The visual opening. Upper orbital slit. The lower orbital fissure. Lacrimal fossa. Lacrimal canal. The contents of the eye socket. Tarzoorbital fascia. Tennon's capsule. Eyelids. Internal and external ligaments of the eyelids. Tear lake. The free edge of the eyelids. Eyelash. Intercostal space. Meibomian glands. Cartilage of the eyelid. The mucous membrane. Circular muscle. Mcsca, lifting the upper eyelid. Blood supply to the eyelids. Lymphatic vessels. The connective membrane or conjunctiva. Three divisions of the conjunctiva. Conjunctival sac. Conjunctival histology. The semilunar fold. Tear meat. Blood supply to the conjunctiva. Injection of the eyeball. Lymphatic vessels. Sensitive nerves. Conjunctival functions. The eyeball.The outer shell of the eye. Sclera. Lattice plate. The cornea. Vascular tract of the eye. The iris. Pupil. The sphincter and dilator of the iris. The ciliary body. Ciliary or accommodative muscle. The actual vascular membrane or choroid. The inner shell of the eye. Two sections of the retina. Microscopic structure of the retina. Sticks and cones. Blood supply to the retina. Lymphatic vessels of the retina. The physiological significance of the retina. Yellow spot. The central fossa. The optic nerve. Chiasmus. Visual tracts. External cranked bodies. The visual beam of Graziole. Cortical visual centers. The lens. Zinc ligament. Vitreous body. Intraocular fluid or watery moisture. The back and front cameras of the eye. Shlemmov channel. Trabecula. The relationship of the dental system and the organ of vision. Cruson's disease (craniofacial dysostosis). Syndrome of the first gill arch. Meyer-Schwikkerath-Gruterich-Weyers syndrome. Mandibulofacial dysostosis (Franceschetti). Nasociliary nerve syndrome. Pterygoid node syndrome (Slyder syndrome). Ciliary node syndrome (Hageman-Pochman).

Control questions for self-preparation of students:

1. The paper plate of the lattice bone is part of the _____wall of the orbit
2. For the medial adhesions of the eyelids, it is characteristic of:
3. For the conjunctiva of the cartilage, it is characteristic of:
4. The lacrimal gland is located:
5. The posterior pole of the eye corresponds to:
6. The cornea has the shape:
7. The surface of the sclera in an adult is ___ the surface of the eyeball.
8. The main function of the iris is:
9. The boundary separating the ciliary body from the choroid is:
10. The actual vascular membrane is formed by:
11. The blind part of the retina covers:
12. The cortical visual center is located in:
13. Anatomical structures that are the boundaries of the anterior chamber include:
14. Watery moisture from the rear chamber to the front penetrates through:
15. The blood supply to the lens is carried out by:
16. Name the diseases in which there is pathology of the eyes and dental system.

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9. 9. Somov E.E. Clinical anatomy of the human visual organ. - 4th ed. – Moscow: MEDpress-inform, 2016. – 136 p.

Lecture 2.

Topic: Visual functions, starting from birth in children and in adults.

Lecture plan:

1. Physiology of visual perception.
2. Visual functions.
3. Visual acuity.
4. Color vision.
5. Field of view.
6. Color perception.

Text material of the lecture: In the perception of the external world, the leading place belongs to the organ of vision. Primary visual information occurs in the retina. The retinal photoreceptor is a highly differentiated cell. Photophysical, photochemical and enzymatic processes of transformation of light energy into physiological excitation. Functionally, the retina of the eye can be divided into a central part and a peripheral part. Central or shaped vision. Visual acuity. The angle of view. Normal visual acuity. Tables for the study of visual acuity. Tables of Sivtsev and Golovin. The study of visual acuity. The Snellen formula. Determination of the presence of light perception and the state of light projection. Primrose test. Absolute blindness. Determination of visual acuity in children. Age dynamics of central vision. Objective methods for determining visual acuity. Color perception. Achromatic and chromatic colors of the spectrum. Three main features of chromatic colors. Three-component theory of color perception. Helmholtz's theory of color vision. Congenital color blindness. Diagnosis of color vision disorders. Polychromatic tables of Professor E.B. Rabkin. Anomaloscopy. Acquired color vision disorders. Peripheral vision. Examination of the field of vision. Donders control method. Computer perimetry. The perimeter of the Foerster. Normal peripheral boundaries of the visual field. Fields of view on colors. Qualitative (quantitative) perimetry. Static perimetry. Automatic perimeters. Campimetry. Narrowing of the boundaries of the field of view. Homonymous homonymous hemianopia. Heteronymous heteronymous hemianopsia. Scotomas. Determination of the boundaries of the visual field in children. Light perception. Adaptation. Light adaptation. Dark adaptation. The study of dark adaptation. Adaptometers. The Kravkov-Purkinje table. Hemeralopia. Congenital and acquired hemeralopia. Symptomatic and functional hemeralopia.

Control questions for self-preparation of students:

1. List the departments of the visual analyzer:
2. What image is formed on the photoreceptors of the retina?
3. The transformation of the energy of a nerve impulse into a visual sensation occurs in:
4. The angle of view with a visual acuity of 1.0 is equal to:
5. With visual acuity equal to 1.0, the patient in the Sivtsev table should read the optotypes of the ___ series:
6. The apparatus in which the tables are placed for the study of visual acuity is called:
7. Long-wave colors are:
8. With uniform irritation of all color-sensing components of the retina, the perception of _____ color is formed.
9. When the function of one of the three types of color-sensing components falls out, it is formed:
10. Both eyes, without moving, cover the horizontal field of view in:
11. What diameter is preferable to choose an object when examining the perimeter of the boundaries of the field of view for white?
12. First described the "blind spot":
13. There are the following types of hemianopsias:
14. In the study of light perception according to the Kravkov-Purkinje table, the first becomes visible _____ square:
15. Hemeralopia is most often observed in diseases:

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10. Koroev O.A., Koroev A.O. Methodological recommendations for mastering practical skills in ophthalmology. 2015.

Lecture 3.

Topic: Заболевания век, конъюнктивы и слезных органов.

Lecture plan:

1. Патология век.
2. Аномалии положения и формы века.
3. Воспалительные заболевания век.
4. Воспаление конъюнктивы (конъюнктивиты).
5. Патология слезопродуцирующего аппарата.
6. Патология слезоотводящего аппарата.

Text material of the lecture: Pathology of the eyelids. Anomalies of eyelid development. Congenital ptosis. Epicanthus. Marcus-Gunn syndrome. Martin Ama syndrome. Congenital coloboma of the eyelids. Ankyloblefaron. Microblepharon. The turn of the century. Ablefaria. Inflammatory infectious diseases of the eyelids. Boil of the century. Carbuncle of the century. Abscess of the eyelid. Phlegmon of the century. Erysipelas of the eyelids. Shingles. A contagious mollusk. Fungal diseases of the eyelids. Actinomycosis. Allergic diseases of the eyelids. Quincke's edema. Diseases associated with violation of the trophic skin of the eyelids. Half atrophy of the face. Diseases of the edges of the eyelids. Blepharitis. Barley. Chalazion. Tumors of the eyelids. Papilloma. Senile wart. Senile keratosis. Skin horn. Bowen's epithelioma. Pigmented xeroderma. Capillary hemangioma. Nevi. Malignant tumors of the eyelids. Eyelid skin cancer. Adenocarcinoma of the meibomian gland. Melanoma.

Diseases of the connective membrane. Acute infectious conjunctivitis. Acute conjunctivitis. Bacterial conjunctivitis. Acute epidemic conjunctivitis of Koch-Weeks. Gonococcal conjunctivitis (gonoblennorrhea). Diphtheria conjunctivitis. Pneumococcal conjunctivitis. Angular conjunctivitis of Morax-Axenfeld. Acute and chronic conjunctivitis caused by Staphylococcus. Acute conjunctivitis caused by Pseudomonas aeruginosa. Chronic conjunctivitis. Adenovirus eye diseases. Adeno-pharyngoconjunctival fever. Epidemic keratoconjunctivitis. Epidemic hemorrhagic conjunctivitis. Chlamydial conjunctivitis. Trachoma. "Pool" or bath conjunctivitis. Conjunctivitis of endogenous origin. Stevens-Johnson syndrome. Sjogren's syndrome. Pemphigus. Allergic conjunctival diseases. Polynous conjunctivitis. Drug allergy. Spring keratoconjunctivitis. Large-capillary conjunctivitis. Chronic allergic conjunctivitis. Atopic keratoconjunctivitis. Degenerative changes of the conjunctiva. The penguin. The pterygoid hymen is a pterygium. Conjunctival neoplasms. Benign tumors. Dermoid. Lipodermoid. Papillomas. Bowen's epithelioma. Hemangioma. Lymphangioma. Nevus. Progressive nevus. Blue nevus. Primary acquired melanosis. Malignant tumors. Scaly cell carcinoma. Conjunctival melanoma.

Diseases of the lacrimal organs. Pathology of tear-producing organs. Abnormalities of the lacrimal gland. Acute dacryoadenitis. Chronic dacryoadenitis. Mikulich syndrome. Mixed tumors of the lacrimal gland. Cylinders. Sarcomas. Adenocarcinomas. Cysts of the lacrimal glands. Sarcomas. Pathology of the lacrimal organs. Lacrimation. Crocodile tears syndrome. Lacrimation in the syndrome of the pterygoid node, nasociliary nerve. Purulent inflammation of the tubules (canalliculitis). Inflammation of the lacrimal sac. Dacryocystitis is chronic. Acute dacryocystitis, or phlegmon of the lacrimal sac. Dacryocystitis of newborns. Tumors of the lacrimal sac.

Control questions for self-preparation of students:

1. Congenital shortening of the ocular slit in the horizontal meridian is called:
2. In congenital ptosis, surgical treatment is mainly carried out with _____ age:
3. The Morax-Axenfeld wand causes _____blepharitis:
4. Acute purulent inflammation of the hair follicle or sebaceous gland of the eyelid is called:
5. The main symptoms characteristic of eyelid inversion:
6. Manifestations of congenital anomalies of the lacrimal gland are possible in the form of:
7. In the treatment of dacryoadenitis, the appointment is justified:
8. Mikulich's disease is:
9. A congenital anomaly of the tear ducts is not:
10. The cause of dacryocystitis is most often:
11. Name the types of eyeball injection:
12. Acute epidemic conjunctivitis is caused by:
13. Instillations are currently used to prevent gonoblennorrhea of newborns:

14. What are the most characteristic signs of adenovirus conjunctivitis:
15. The fusion of the conjunctiva of the eyelids with the conjunctiva of the eyeball is called:

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Lecture 4.

Topic: Pathology of the cornea. Diseases of the vascular membrane of the eye.

Lecture plan:

1. Anomalies of the cornea.
2. Inflammatory diseases of the cornea.
3. Dystrophy of the cornea.
4. Outcomes of corneal diseases.
5. Tumors of the horn tumors of the cornea.
6. Abnormalities of the vascular tract.
7. Inflammatory diseases of the vascular tract.
8. Tumors of the vascular membrane of the eye.

Text material of the lecture: Anomalies of the cornea. Keratoconus. Keratoglobus. Flat cornea. Megalocornea. Microcornea. Microphthalmos. Inflammatory diseases of the cornea. Inflammatory processes of the cornea – keratitis. Corneal infiltration. Ingrowth of vessels into the cornea. Classification of keratitis. Exogenous keratitis. Infectious keratitis of bacterial origin. A creeping ulcer. The corrosive ulcer of the Moray eel. Wegener's granulomatosis. Fungal keratitis. Severe herpetic ulcer. Corneal ulcer caused by Pseudomonas aeruginosa. Corneal ulcer caused by Staphylococcus, streptococcus, pneumococcus. Corneal ulcer is fungal. Acanthamoebic corneal ulcer (acanthamoebic keratitis). Corneal ulcer caused by gonococcus. Recurrent erosion of the cornea. Herpetic diseases of the cornea. Tree-like keratitis. Metagerpetic keratitis. Stromal keratitis. Discoid keratitis. Keratitis caused by the varicella zoster virus. Other types of keratitis. Neuroparalytic keratitis. Keratitis with non-closure of the eye slit. Parenchymal keratitis in congenital syphilis. Tuberculous keratitis. Deep diffuse keratitis. Deep limited keratitis. Sclerosing keratitis. Tuberculosis-allergic keratitis. Flickenulous keratitis. The wandering flickten. Pannous flyctenular keratitis. Acanthamoebic lesions of the cornea. Eye damage in Sjogren's syndrome. Charlene syndrome. Dry eye syndrome. Dystrophy of the cornea. Primary and secondary dystrophies. Outcomes of corneal diseases. Keratoplasty. Keratoprosthetics. Tumors of the cornea. Dermoids. Keratinizing papilloma. Bowen's epithelioma.
Pathology of the vascular tract. Abnormalities of the vascular tract. Coloboma of the iris. Congenital aniridia. Polycoria. Corectopia. Fuchs heterochromia. Pupillary membrane. Congenital cysts. Albinism. Inflammatory diseases of the vascular tract. Iridocyclitis or anterior uveitis. Posterior uveitis choroiditis. Uveitis due to focal infection. Toxoplasmosis uveitis. Tuberculous uveitis. Syphilitic uveitis. Uveitis of viral etiology. Herpetic uveitis. Influenza iridocyclitis. Uveitis in systemic and syndromic diseases. Rheumatic iridocyclitis. Rheumatoid uveitis. Bekhterev-Strumpell-Marie disease. Uveitis in juvenile rheumatoid arthritis. Reiter's syndrome. Behcet's disease. Sarcoidosis or Benier-Beck-Schaumann disease. Geerfordt syndrome. Peripheral uveitis. Tumors of the vascular membrane of the eye. Tumors of the iris.

Control questions for self-preparation of students:

1. The presence of an enlarged cornea in diameter may be a sign of the presence of:
2. Corneal vascularization is called:
3. Exogenous keratitis includes:
4. What is the way to determine the integrity of the cornea?
5. What is the symptom characteristic of threatening corneal perforation:
6. Yellow-gray opacities localized in the deep layers of the cornea are most characteristic for:
7. The most intense corneal opacity is called:
8. The cause of discoid keratitis is:
9. Name the operations by which it is possible to restore vision to a patient with corneal opacity:
10. Congenital anomalies of the iris include:
11. The clinic of iridocyclitis is characterized by:
12. The narrowing of the pupil in a patient with iridocyclitis can be explained:
13. When the pupil dilates in the case of iridocyclitis, it may have an irregular shape due to:
14. The appearance of hypopion in the anterior chamber of the eye with iridocyclitis is caused by:
15. The fusion of the pupil with iridocyclitis leads to:
16. Instillations are used as first aid for acute iridocyclitis:
17. What is the purpose of using mydriatics for iridocyclitis?

18. What are the possible outcomes of choroiditis?

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Lecture 5.

Topic: Pathology of the lens. Glaucoma.

Lecture plan:

1. Anomalies of lens development.
2. Congenital cataracts.
3. Acquired cataracts.
4. Aphakia.
5. Secondary cataract.
6. Intraocular pressure.
7. Primary glaucoma.
8. Congenital glaucoma.
9. Secondary glaucoma.

Text material of the lecture: Pathology of the lens. Developmental anomalies. Dislocation of the lens in Marfan and Marchesani syndromes. Marfan syndrome. Marchesani syndrome. Congenital cataracts. A combination of congenital cataracts with malformations of the eye and malformations of other organs and parts of the human body. A dentist should show a child with congenital pathology of the upper lip and palate not only to an otolaryngologist, a neuropsychiatrist, a pediatrician, a geneticist, a speech therapist, but also to an ophthalmologist. Combination of layered cataract with hypoplasia and aplasia of tooth enamel. Acquired complicated cataracts. Diabetic cataract. Senile cataract. Cortical cataract. Nuclear cataract. Cataract treatment. Two ways to remove a cloudy lens. Aphakia. Correction of aphakia. Secondary cataract.

Intraocular pressure. Circulation of intraocular fluid. Measurement of intraocular pressure. Maklakov's tonometer. Elastotonometry. The method of tonography. Glaucoma. Primary glaucoma. Classification of primary glaucoma. Open-angle glaucoma. Concepts of pathogenesis of open-angle glaucoma. Angle-closure glaucoma. Acute attack of glaucoma. Differential diagnosis with acute iridocyclitis. Treatment of an acute attack of glaucoma. Early diagnosis of glaucoma. Examination of the field of vision. Tonometry. Daily tonometry. Elastotonometry Filatov V.P.-Kalfa S.F. Loading and unloading tests. Treatment of glaucoma. Conservative treatment. General treatment of glaucoma. Surgical treatment of glaucoma. Laser operations. Congenital glaucoma. Causes of congenital glaucoma. Classification of congenital glaucoma. Secondary congenital glaucoma. Aniridia. Rieger syndrome. Frank-Kamenetsky syndrome. Secondary congenital syndromic glaucoma. Neurofibromatosis. Hippel-Lindau disease. Encephalo-trigeminal Sturge-Weber syndrome. "Juvenile" glaucoma.

Control questions for self-preparation of students:

1. Congenital defects of the lens are considered:
2. For conservative treatment with incipient cataract, you can use:
3. With immature cataract, the following complications are possible:
4. Describe the clinic of overripe cataract:
5. Secondary is called a cataract that has arisen as a result of:
6. The main ocular manifestation of Marfan syndrome is:
7. What are the main signs of aphakia:
8. Which type of intraocular lens fixation is currently optimal:
9. Name several types of complicated cataracts:
10. The secretion of intraocular fluid is carried out:
11. Primary glaucoma has the following forms:
12. Primary glaucoma has stages of development:
13. What are the symptoms characteristic of an acute attack of angle-closure glaucoma?
14. The ways of outflow of intraocular fluid from the eye are:
15. In primary angle-closure glaucoma, the angle of the anterior chamber is blocked:
16. Tonometric intraocular pressure has a normal level equal to:
17. What are the main types of hypotensive glaucoma treatment:

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Lecture 6.

Topic: Diseases and neoplasms of the orbit.

Lecture plan:

1. Symptoms of diseases of the orbit and anomalies of its development.
2. Inflammatory diseases of the orbit.
3. Chronic inflammatory diseases of the orbit.
4. Tumors of the orbit.
5. Changes in the eye socket in endocrine diseases.

Text material of the lecture: Symptoms of diseases of the orbit and anomalies of its development. Exophthalmos. Enophthalmos. Exophthalmometry. Limitation of the mobility of the eyeball. Double vision. The possibility of repositioning the eyeball. A change in the refraction of the eye and a decrease in visual functions. Swelling of the eyelids and mucous membrane. Pain and paresthesia. Ptosis. General phenomena. Anomalies in the development of the orbit. Anencephaly. Craniostenosis. Hemiatrophy of the face. Congenital hydrocephalus is Cruzon's disease. Congenital hydrophthalmos. The coincidence of congenital anomalies of the eye socket, with changes in the palate and upper jaw. Inflammatory diseases of the orbit. Causes of inflammatory processes in the orbit. Osteoperiostitis. Subperiosteal abscess. Phlegmon of the orbit. Fungal diseases of the orbit. Sporotrichosis. Tenonite. Chronic inflammatory diseases of the orbit. Sarcoidosis. Wegener's granulomatosis. Pseudo-humor. Tumors of the orbit. Diagnosis of orbital tumors. Benign tumors of the orbit. Dermoid cysts. Cerebral and meningial hernias. Hemangioma. Osteoma of the eye socket. Mucous cyst of the paranasal sinuses. Neurofibroma of the orbit. Optic nerve gliomas. Malignant tumors of the orbit. Sarcomas. Cancer of the orbit. Parasitic cysts. Echinococcus. Cysticercus. Ascariasis. Changes in the eye socket in endocrine diseases. Thyrotoxic exophthalmos. Edematous exophthalmos. Endocrine myopathy.

Control questions for self-preparation of students:

1. What are the main symptoms of eye socket diseases?
2. Name the inflammatory diseases of the orbit.
3. What are the clinical signs of eye socket phlegmon?
4. What pathology refers to chronic inflammatory diseases of the eye socket?
5. What changes of the eye socket occur in endocrine diseases?
6. Name the benign tumors of the orbit:
7. Malignant neoplasms of the eye socket are:

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Lecture 7.

Topic: Damage to the organ of vision.

Lecture plan:

1. The structure of eye injury.
2. Contusion damage to the orbit.
3. Wounds of the eyelids and conjunctiva.
4. Eye damage by insect sting.
5. Non-penetrating wounds of the cornea and sclera.
6. Puncture wounds of the eyeball.
7. Complications of penetrating wounds.
8. Burns of the eye and its appendages.
9. Damage to the organ of vision with self-defense gas weapons.

Text material of the lecture: Damage to the organ of vision. The structure of eye injuries. Contusion damage to the orbit. Exophthalmos. Enophthalmos. Damage to the optic nerve. Fractures of the upper part of the face according to A.A. Limberg. Fractures of the upper jaw. Subbasal fractures. Closed fractures of the upper wall of the eye socket. Closed fractures of the outer wall of the eye socket. Fractures of the lower wall of the eye socket. Fractures of the zygomatic bone and arch. Fractures of the bottom of the orbit. Fractures of the face according to Lefort. The separation of the jaw along with the nasal bones from the zygomatic bone and the base of the skull. Separation of the upper jaw together with the nasal bones and the zygomatic bone or complete craniofacial separation. Pulsating exophthalmos. Cranial lesions. Contusions of the soft tissues of the eye socket. Complications of contusion of the soft tissues of the eye socket. Injuries to the eye socket. Lacerations. Stab wounds. Open fractures of the upper wall of the eye socket. Open fractures of the lower wall of the eye socket. Open fractures of the outer wall of the eye socket. Fractures of the inner wall of the eye socket. Gunshot wounds to the eye socket. Emergency care for eye socket injuries. Treatment of damage to the eye socket. Wounds of the eyelids and conjunctiva. Wounds of the eyelids. Conjunctival lesions. Eye damage by insect sting. Non-penetrating wounds of the cornea and sclera. Erosion of the cornea. Non-penetrating corneal wounds. Foreign bodies of the cornea. Non-penetrating wounds of the sclera. Contusion of the eyeball. Hyphema. Subconjunctival rupture of the sclera. Damage to the iris. Subluxation and dislocation of the lens. Traumatic cataract. Vitreous hemorrhage. Rupture of the actual vascular membrane and the ciliary body. Emergency care. Birth eye injuries. Puncture wounds of the eyeball. Wounds can be corneal, corneal-scleral, scleral, with or without loss of internal membranes and contents, with or without the introduction of a foreign body into the eye. Wounds that run through all layers. Loss of the iris. Hyphema and damage to the lens. Prolapse of the vascular membrane, retina, vitreous. Complications of penetrating wounds. Complications associated with infection. Purulent iridocyclitis. Endophthalmitis. Panophthalmitis. Traumatic iridocyclitis. Sympathetic inflammation. Intraocular foreign bodies. Siderosis. Chalcosis. Emergency care for penetrating wounds. Radiography. Treatment of penetrating eye infections. Burns of the eye and its appendages. Thermal burns. Acid burns. Burns with alkali. Burns in disasters. Treatment of eye burns. Burns of the eyes with radiant energy. Damage to the organ of vision with a gas self-defense weapon. First medical and pre-medical care. First aid. Specialized ophthalmological care. Therapeutic tactics in case of damage to the organ of vision with gas pistols. Frostbite of the eyes.

Control questions for self-preparation of students:

1. The occurrence of subcutaneous emphysema of the eyelids after injury most often indicates:
2. Puncture wounds of the soft tissues of the eye can cause:
3. When surgically treating eyelid tears, the most important thing is:
4. Traumatic detachment of the iris at the root is called:
5. Complications of penetrating eye wounds can be:
6. A burn that is accompanied by the formation of blisters, conjunctival ischemia and corneal erosion is a ___ degree burn:
7. The rupture of the eyelid in the medial adhesions is complicated due to:
8. The main symptoms of a fractured eye socket are:
9. Hemorrhage in the anterior chamber of the eye is called:
10. What are the ways to determine the presence and localization of an intraocular foreign body?

11. Describe first aid for penetrating eye injury:
12. What is electrovetoophthalmia?

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